



SEQUENCE LISTING

<110> Alland, David
Bloom, Barry R.
Jacobs Jr., William R.

<120> iniB, iniA AND iniC GENES OF MYCOBACTERIA AND METHODS
OF USE

<130> 96700/491

<140> 09/177,349

<141> 1998-10-23

<160> 14

<170> PatentIn Ver. 2.0

<210> 1

<211> 53

<212> DNA

<213> Mycobacterium tuberculosis

<400> 1

cacgggtacg acatccacgg ataagttccg gaccggcgta ggggtgcccc att 53

<210> 2

<211> 5036

<212> DNA

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<400> 2

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<210> 3

<211> 479

<212> PRT

<213> Mycobacterium tuberculosis

<400> 3

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Ala Ala Arg Ser Phe Val Ala Ala Pro Gly Arg Ala Met Thr Ser Ala
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Gly Leu Ile Asp Ile Ala Pro His Gln Ile Ser Ser Val Ala Ala Asn
 35 40 45

Val Val Pro Gly Leu Asn Leu Gly Ala Gly Asp Pro Met Ser Gly Leu
 50 55 60

Arg Gln Ala Val Ala Ala Arg His Gly Phe Ala Gln Asp Val Ala Asn
 65 70 75 80

Val Gly Phe Ala Gly Asp Ala Gly Ala Gly Val Ala Ser Val Ile Thr
 85 90 95

Thr Asp Val Gly Ala Gly Leu Ala Ser Gly Leu Gly Ala Gly Phe Leu
 100 105 110

Gly Gln Gly Gly Leu Ala Leu Ala Ala Ser Ser Gly Gly Phe Gly Gly
 115 120 125

Gln Val Gly Leu Ala Ala Gln Val Gly Leu Gly Phe Thr Ala Val Ile
 130 135 140

Glu Ala Glu Val Gly Ala Gln Val Gly Ala Gly Leu Gly Ile Gly Thr
 145 150 155 160

Gly Leu Gly Ala Gln Ala Gly Met Gly Phe Gly Gly Gly Val Gly Leu
 165 170 175

Gly Leu Gly Gly Gln Ala Gly Gly Val Ile Gly Gly Ser Ala Ala Gly
 180 185 190

Ala Ile Gly Ala Gly Val Gly Gly Arg Leu Gly Gly Asn Gly Gln Ile
 195 200 205

Gly Val Ala Gly Gln Gly Ala Val Gly Ala Gly Val Gly Ala Gly Val
 210 215 220

Gly Gly Gln Ala Gly Ile Ala Ser Gln Ile Gly Val Ser Ala Gly Gly
 225 230 235 240

Gly Leu Gly Gly Val Gly Asn Val Ser Gly Leu Thr Gly Val Ser Ser
 245 250 255

Asn Ala Val Leu Ala Ser Asn Ala Ser Gly Gln Ala Gly Leu Ile Ala
 260 265 270

Ser Glu Gly Ala Ala Leu Asn Gly Ala Ala Met Pro His Leu Ser Gly
 275 280 285

Pro Leu Ala Gly Val Gly Val Gly Gly Gln Ala Gly Ala Ala Gly Gly
 290 295 300

Ala Gly Leu Gly Phe Gly Ala Val Gly His Pro Thr Pro Gln Pro Ala
 305 310 315 320

Ala Leu Gly Ala Ala Gly Val Val Ala Lys Thr Glu Ala Ala Ala Gly
 325 330 335

Val Val Gly Gly Val Gly Gly Ala Thr Ala Ala Gly Val Gly Gly Ala
 340 345 350

His Gly Asp Ile Leu Gly His Glu Gly Ala Ala Leu Gly Ser Val Asp
 355 360 365

Thr Val Asn Ala Gly Val Thr Pro Val Glu His Gly Leu Val Leu Pro
 370 375 380

Ser Gly Pro Leu Ile His Gly Gly Thr Gly Gly Tyr Gly Gly Met Asn
 385 390 395 400

Pro Pro Val Thr Asp Ala Pro Ala Pro Gln Val Pro Ala Arg Ala Gln
 405 410 415

Pro Met Thr Thr Ala Ala Glu His Thr Pro Ala Val Thr Gln Pro Gln
 420 425 430

His Thr Pro Val Glu Pro Pro Val His Asp Lys Pro Pro Ser His Ser
 435 440 445

Val Phe Asp Val Gly His Glu Pro Pro Val Thr His Thr Pro Pro Ala
 450 455 460

Pro Ile Glu Leu Pro Ser Tyr Gly Leu Phe Gly Leu Pro Gly Phe
 465 470 475

<210> 4

<211> 640

<212> PRT

<213> Mycobacterium tuberculosis

<400> 4

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Ala Arg Lys Trp Gly Asp Thr Val Thr Gln Pro Asp Asp Pro Arg Arg
 20 25 30

Val Gly Val Ile Val Glu Leu Ile Asp His Thr Ile Ala Ile Ala Lys
 35 40 45

Leu Asn Glu Arg Gly Asp Leu Val Gln Arg Leu Thr Arg Ala Arg Gln
 50 55 60

Arg Ile Thr Asp Pro Gln Val Arg Val Val Ile Ala Gly Leu Leu Lys
 65 70 75 80

Gln Gly Lys Ser Gln Leu Leu Asn Ser Leu Leu Asn Leu Pro Ala Ala
 85 90 95

Arg Val Gly Asp Asp Glu Ala Thr Val Val Ile Thr Val Val Ser Tyr
 100 105 110

Ser Ala Gln Pro Ser Ala Arg Leu Val Leu Ala Ala Gly Pro Asp Gly
 115 120 125

Thr Thr Ala Ala Val Asp Ile Pro Val Asp Asp Ile Ser Thr Asp Val
 130 135 140

Arg Arg Ala Pro His Ala Gly Gly Arg Glu Val Leu Arg Val Glu Val
 145 150 155 160

Gly Ala Pro Ser Pro Leu Leu Arg Gly Gly Leu Ala Phe Ile Asp Thr
 165 170 175

Pro Gly Val Gly Gly Leu Gly Gln Pro His Leu Ser Ala Thr Leu Gly
 180 185 190

Leu Leu Pro Glu Ala Asp Ala Val Leu Val Val Ser Asp Thr Ser Gln
 195 200 205

Glu Phe Thr Glu Pro Glu Met Trp Phe Val Arg Gln Ala His Gln Ile
 210 215 220

Cys Pro Val Gly Ala Val Val Ala Thr Lys Thr Asp Leu Tyr Pro Arg
 225 230 235 240

Trp Arg Glu Ile Val Asn Ala Asn Ala Ala His Leu Gln Arg Ala Arg
 245 250 255

Val Pro Met Pro Ile Ile Ala Val Ser Ser Leu Leu Arg Ser His Ala
 260 265 270

Val Thr Leu Asn Asp Lys Glu Leu Asn Glu Glu Ser Asn Phe Pro Ala
 275 280 285

Ile Val Lys Phe Leu Ser Glu Gln Val Leu Ser Arg Ala Thr Glu Arg
 290 295 300

Val Arg Ala Gly Val Leu Gly Glu Ile Arg Ser Ala Thr Glu Gln Leu
 305 310 315 320

Ala Val Ser Leu Gly Ser Glu Leu Ser Val Val Asn Asp Pro Asn Leu
 325 330 335

Arg Asp Arg Leu Ala Ser Asp Leu Glu Arg Arg Lys Arg Glu Ala Gln
 340 345 350

Gln Ala Val Gln Gln Thr Ala Leu Trp Gln Gln Val Leu Gly Asp Gly
 355 360 365

Phe Asn Asp Leu Thr Ala Asp Val Asp His Asp Leu Arg Thr Arg Phe
370 375 380

Arg Thr Val Thr Glu Asp Ala Glu Arg Gln Ile Asp Ser Cys Asp Pro
385 390 395 400

Thr Ala His Trp Ala Glu Ile Gly Asn Asp Val Glu Asn Ala Ile Ala
405 410 415

Thr Ala Val Gly Asp Asn Phe Val Trp Ala Tyr Gln Arg Ser Glu Ala
420 425 430

Leu Ala Asp Asp Val Ala Arg Ser Phe Ala Asp Ala Gly Leu Asp Ser
435 440 445

Val Leu Ser Ala Glu Leu Ser Pro His Val Met Gly Thr Asp Phe Gly
450 455 460

Arg Leu Lys Ala Leu Gly Arg Met Glu Ser Lys Pro Leu Arg Arg Gly
465 470 475 480

His Lys Met Ile Ile Gly Met Arg Gly Ser Tyr Gly Gly Val Val Met
485 490 495

Ile Gly Met Leu Ser Ser Val Val Gly Leu Gly Leu Phe Asn Pro Leu
500 505 510

Ser Val Gly Ala Gly Leu Ile Leu Gly Arg Met Ala Tyr Lys Glu Asp
515 520 525

Lys Gln Asn Arg Leu Leu Arg Val Arg Ser Glu Ala Lys Ala Asn Val
530 535 540

Arg Arg Phe Val Asp Asp Ile Ser Phe Val Val Ser Lys Gln Ser Arg
545 550 555 560

Asp Arg Leu Lys Met Ile Gln Arg Leu Leu Arg Asp His Tyr Arg Glu
565 570 575

Ile Ala Glu Glu Ile Thr Arg Ser Leu Thr Glu Ser Leu Gln Ala Thr
580 585 590

Ile Ala Ala Ala Gln Val Ala Glu Thr Glu Arg Asp Asn Arg Ile Arg
595 600 605

Glu Leu Gln Arg Gln Leu Gly Ile Leu Ser Gln Val Asn Asp Asn Leu
610 615 620

Ala Gly Leu Glu Pro Thr Leu Thr Pro Arg Ala Ser Leu Gly Arg Ala
625 630 635 640

<210> 5

<211> 493

<212> PRT

<213> Mycobacterium tuberculosis

<400> 5

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20 25 30

Gln Leu Asp Arg Ile Gly Ala Arg Leu Ala Glu Pro Leu Arg Ile Ala
35 40 45

Leu Ala Gly Thr Leu Lys Ala Gly Lys Ser Thr Leu Val Asn Ala Leu
50 55 60

Val Gly Asp Asp Ile Ala Pro Thr Asp Ala Thr Glu Ala Thr Arg Ile
65 70 75 80

Val Thr Trp Phe Arg His Gly Pro Thr Pro Arg Val Thr Ala Asn His
85 90 95

Arg Gly Gly Arg Arg Ala Asn Val Pro Ile Thr Arg Arg Gly Gly Leu
100 105 110

Ser Phe Asp Leu Arg Arg Ile Asn Pro Ala Glu Leu Ile Asp Leu Glu
115 120 125

Val Glu Trp Pro Ala Glu Glu Leu Ile Asp Ala Thr Ile Val Asp Thr
130 135 140

Pro Gly Thr Ser Ser Leu Ala Cys Asp Ala Ser Glu Arg Thr Leu Arg
145 150 155 160

Leu Leu Val Pro Ala Asp Gly Val Pro Arg Val Asp Ala Val Val Phe
165 170 175

Leu Leu Arg Thr Leu Asn Ala Ala Asp Val Ala Leu Leu Lys Gln Ile

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195	200	205
Ala Ser Arg Ala Asp Glu Ile Gly Ala Gly Arg Ile Asp Ala Met Leu		
210	215	220
Ser Ala Asn Asp Val Ala Lys Arg Phe Thr Arg Glu Leu Asn Gln Met		
225	230	235
Gly Ile Cys Gln Ala Val Val Pro Val Ser Gly Leu Leu Ala Leu Thr		
245	250	255
Ala Arg Thr Leu Arg Gln Thr Glu Phe Ile Ala Leu Arg Lys Leu Ala		
260	265	270
Gly Ala Glu Arg Thr Glu Leu Asn Arg Ala Leu Leu Ser Val Asp Arg		
275	280	285
Phe Val Arg Arg Asp Ser Pro Leu Pro Val Asp Ala Gly Ile Arg Ala		
290	295	300
Gln Leu Leu Glu Arg Phe Gly Met Phe Gly Ile Arg Met Ser Ile Ala		
305	310	315
Val Leu Ala Ala Gly Val Thr Asp Ser Thr Gly Leu Ala Ala Glu Leu		
325	330	335
Leu Glu Arg Ser Gly Leu Val Ala Leu Arg Asn Val Ile Asp Gln Gln		
340	345	350
Phe Ala Gln Arg Ser Asp Met Leu Lys Ala His Thr Ala Leu Val Ser		
355	360	365
Leu Arg Arg Phe Val Gln Thr His Pro Val Pro Ala Thr Pro Tyr Val		
370	375	380
Ile Ala Asp Ile Asp Pro Leu Leu Ala Asp Thr His Ala Phe Glu Glu		
385	390	395
Leu Arg Met Leu Ser Leu Leu Pro Ser Arg Ala Thr Thr Leu Asn Asp		
405	410	415
Asp Glu Ile Ala Ser Leu Arg Arg Ile Ile Gly Gly Ser Gly Thr Ser		
420	425	430
Ala Ala Ala Arg Leu Gly Leu Asp Pro Ala Asn Ser Arg Glu Ala Pro		

435 440 445
 Arg Ala Ala Leu Ala Ala Ala Gln His Trp Arg Arg Arg Ala Ala His
 450 455 460
 Pro Leu Asn Asp Pro Phe Thr Thr Arg Ala Cys Arg Ala Ala Val Arg
 465 470 475 480
 Ser Ala Glu Ala Met Val Ala Glu Phe Ser Ala Arg Arg
 485 490

<210> 6
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Uniamp primer
 sequence

<400> 6
 cctctgaagg ttccagaatc gatag 25

<210> 7
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Uniamp XhoI
 adapter sequence top strand

<400> 7
 cctctgaagg ttccagaatc gatagctcga gt 32

<210> 8
 <211> 35
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Uniamp XhoI
 adapter sequence bottom strand

<400> 8
 actcgagcta tcgattctgg aaccttcaga gggttt 35

<210> 9
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 9
gcgctggcgg gagatcgta atg

23

<210> 10
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 10
tgcgcagtcg ggtcacagga gtcg

24

<210> 11
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 11
tcccgccgcc gaacaccta

19

<210> 12
<211> 19
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 12
ggatccggcc gaccagaga

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<210> 13
<211> 24
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 13

ggagtacggc cgcaaggcta aaac

24

<210> 14

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 14

cagaccccga tccgaactga gacc

24